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ABSTRACT

This paper reports the findings of a research project that aims to get an indicator of why Berry College (Georgia) graduates remain in the teaching profession. A questionnaire was mailed to 39 alumni who had received degrees enabling them to be certified to teach secondary school mathematics. The letter mailed to the graduates cited three areas of interest: teacher attrition, teacher induction, and program evaluation. The first area of interest poses the question of whether Berry mathematics education graduates remain in the teaching profession longer than the averages indicated by other studies. A second arena in which the alumni were able to share information was in disclosing what they would feel to be useful advice to first-year teachers. Also, alumni input was an important part of the on-going process of developing college programs that are in touch with the reality of today's classrooms. Respondents mention some of the factors that cause teachers to leave or think of leaving the profession which include lack of administration support and financial considerations. They admonish other teachers to find a mentor and to ask questions. The alumni have very positive opinions of their mathematics education program at Berry. Appendices include the survey and survey responses. (ASK)

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Survey of 1987 - 1998 Berry College Mathematics Education Graduates

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and

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Berry College

January, 1999

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Survey of 1987 - 98 Berry College Mathematics Education Graduates

Introduction

Berry College is a private, independent college in Northwest Georgia. There are approximately 1700 undergraduate students plus 200 students working on either a Master of Business Administration, Master of Education, or Education Specialist degree. Berry encourages work experience as a part of each student's development and also fosters a religion-in-life emphasis.

The teacher education program at Berry produces teachers of preschool through high school who are developers of human potential. Berry enjoys an excellent reputation with regard to the graduates of its teacher education program.

In the summer of 1998 a questionnaire was mailed to 39 alumni of Berry College who had received degrees enabling them to be certified to teach secondary mathematics. The names and current addresses were obtained from the Alumni Office of Berry College. This sample included the most recent graduates of spring, 1998, who could not have had a full-time teaching job yet.

The letter mailed to the graduates (See Appendix A) cited three areas of interest: teacher attrition, teacher induction, and program evaluation. A copy of the questionnaire is included in Appendix B. A response rate of 67% was obtained; 26 out of 39 questionnaires were returned.

Contributions to the Teaching Profession

The first area of interest poses the question of whether Berry College mathematics education graduates remain in the teaching profession longer than the averages indicated by other studies. An oft-cited rule of thumb is that 50% of teachers have left the profession after five years. A study of 13,000 teachers who began their careers in Michigan during the 1970s revealed that 56% were still teaching after six years (Murnane, 1987). However, in scientific disciplines the attrition may be greater (Weld, 1998).

Of the twenty-six respondents, five indicated they have not taught. However, three of those five had graduated within the past year. Altogether the 21 teaching respondents had taught 90 3/4

years. There were 55 3/4 years that the graduates were not teaching, so they were teaching 62% of the years that they could have been teaching.

Half (13 out of 26) of the respondents had zero years that they were eligible to teach but did not teach. For the other half reporting years they did not teach, their reasons are listed in Appendix C along with their occupations when not teaching.

In response to the question as to whether the individual had ever considered leaving the teaching profession, 46% answered "yes." Thirty-five percent had not considered leaving the profession. Three respondents either left the question blank, indicated it was not applicable, or gave another response. The responses to this question are given in Appendix D.

For the current 1998-99 school year, 69% of the respondents have teaching contracts (18 out of 26). Thirty-eight percent have completed graduate degrees (10 out of 26), and thirty-one percent are currently working on a graduate degree (8 out of 26).

A total of 14 items were listed which the teachers considered to be honors. These included several First Year Teachers-of-the-Year, Who's Who listings, Senior Favorite, County Distinguished Service Award, and selections as math coordinator or department chair.

Most (54%) of the respondents belong to the National Council of Teachers of Mathematics, with two others indicating being past members. Thirty-one percent are currently members of Georgia Council of Teachers of Mathematics. Other professional associations they hold membership in are: ASCD, PAGE, AEA, NEA, NASSP, GAE, Alabama Coalition for Excellence in Small Schools, Texas Science Teachers Association, and NSTA.

Teacher Induction

A second arena in which the alumni were able to share information was in disclosing what they would feel to be useful advice to first-year teachers. Their advice (See Appendix E) was used for part of a handout for a Support Group for First-Year Teachers held at the Georgia Council of Teachers of

Mathematics' annual meeting in October, 1998.

Induction programs need to be strengthened. The advice from the alumni can reveal components needed in induction efforts as well as pre-service teacher preparation.

Program Evaluation

Curriculum and instruction are always evolving. With the BellSouth CHARTER School of Education grant, programs are receiving more-than-usual scrutiny. Alumni input is an important part of this on-going process of developing programs that are in touch with the reality of today's classrooms.

Feedback on the mathematics education program is also important in that a person's perception changes over time. What students reflect on end-of-course evaluations may not match with their perceptions after a year or two of full-time teaching.

It is interesting to compare the former students' recommendations with changes that have already taken place, such as more incorporation of technology. Their recommendations

also are useful in convincing current students of the rationale of certain aspects of the program. All their recommendations are listed in Appendix F.

Interpretation/Conclusion

The researcher was curious to get an indicator of how Berry graduates remain in the teaching profession. On the one hand, Berry has a solid reputation for its education program. On the other, the literature (Weld, 1998) indicates that more qualified individuals may stay in teaching less time than those less qualifed in terms of certification test scores.

The 67% response rate to the questionnaire certainly is respectable, and the fact that 69% of the respondents had teaching contracts for the current year is even more encouraging.

Approximately 40% of the Berry mathematics education alumni who reported not having taught during at least part of the time they were eligible to teach cite homemaking and parenting as reasons. This finding supports Murnane's (1987) observation regarding the higher attrition rate of young women. He sees this early attrition as

being a reflection of why they became teachers--the option of leaving for a few years without great cost. He views these patterns of attrition as results of thoughtful actions of individuals responding to incentives.

Berry graduates at least mention some of the other factors which cause teachers to leave or think of leaving the profession--lack of administrative support and financial considerations. Only in the advice to first-year teachers section, though, do they hint at the isolation factor.

There they admonish other teachers to find a mentor and to ask questions. "Find a network. . ." one advises to help a first-year teacher to feel ". . . less lonely." They emphasize survival, not aiming for perfection the first year. They see definite needs for behavior management, psychological distance from students, organizational skills, and time management.

The alumni have very positive opinions of their mathematics education program at Berry. Some of their suggestions have already been implemented with the introduction of new faculty (e.g., more graphing calculator and computer experience). They appreciate the

practical experiences they had and the fact that the field placements began early in their college careers.

Challenges for them include integrating math and science, other laboratory activities, block scheduling, curriculum articulation, and familiarity with major curriculum projects. Awareness of these concerns can aid college faculty in structuring meaningful programs for the pre-service teachers.

Perhaps it will always be the case that a few students finish a program only to realize the vocation for which they prepared is one for which they are not suited. Others will realize that "stopping out" for family is the route they need to take. But for the majority of secondary mathematics teachers with a degree from Berry College, teaching will bring deep satisfaction. And as those teachers reach the adolescents of Georgia and other states, Martha Berry's "multiplier effect" of education will be realized.

References:

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Natale, J. A. "Why Teachers leave." *Executive Educator*, July 1993, pp. 14 - 18.

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Appendices

Berry College

MOUNT BERRY, GEORGIA 30149-5014 • (706) 236-2268

School of Mathematical and Natural Sciences
Department of Mathematical Sciences

July 29, 1998

Dear Berry College Mathematics Education Graduate:

Having taken the position vacated when Dr. Catanzano retired, I am beginning my third year at Berry College. At this time I am contacting mathematics education graduates and would appreciate your taking time to provide some information about your experiences since graduation.

There are several aspects that are of particular interest. One is teacher attrition. A related area is teacher induction--support for first-year teachers. In addition, your input regarding program evaluation would be valuable as Berry reinvents teacher education through its Charter School of Education funded by a BellSouth grant.

The Teacher Education Unit will be having a retreat the second week in August. Thus, if you can provide your responses before that time, those responses could impact program changes.

Thank you for your help. Alumni are of great importance to Berry College. Sharing your perspectives can strengthen the ties between the college and public schools and can promote on-going changes to make teacher education programs more relevant.

Sincerely,

Carla Moldavan

Carla Moldavan, Ed. D.
Associate Professor of Mathematical Sciences

Appendix B

SURVEY OF 1987 - 1998 BERRY COLLEGE MATHEMATICS EDUCATION GRADUATES

Please return to Carla Moldavan, Mathematics Department, Box 5014, Berry College, Mt. Berry, GA 30149-5014. A self-addressed, stamped envelope is provided.

1. Year you obtained your BS degree from Berry College _____

2. Number of years you have taught _____

3. Schools at which you have taught, dates of employment, and grade levels taught:

4. Number of years you have NOT taught since graduation from Berry _____
   Occupation during years NOT teaching:

5. Primary reasons for not teaching during years counted in question #4:

6. Have you ever considered leaving the teaching profession? _____
   If so, why?

7. Do you have a teaching contract for 1998-99? _____

8. Have you completed any graduate degrees? If so, from what institution(s)?

9. Are you currently working towards a graduate degree?

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10. What honors have you received while teaching (STAR Teacher, Teacher of the Year, First Year Teacher of the Year, etc.)?

11. What professional organizations do you belong to (National Council of Teachers of Mathematics, Georgia Council of Teachers of Mathematics, etc.)?

12. What advice would you give to first-year teachers?

13. What recommendations for changes to the mathematics education program at Berry College would you make?

14. Other comments:

If you have questions or concerns about this survey, feel free to e-mail me at cmoldavan@berry.edu or to call me at the office (706-290-2668) or at home (706-234-9153). Thanks!

Number of years you have NOT taught since graduation from Berry:
Occupation during years not teaching:
Primary reasons for not teaching during years counted in question #4:

Statistician

8
pension administrator; homemaker
high violence at school; high stress; no administrative support

½
Director of Sylvan Learning Center
pursue a different opportunity

3.75
Graduate school-- M. Ed Math Ed-- UGA; law school UGA

½
long term substitute--multiple disciplines middle school and high school
system went through a reduction in force; My contract had not yet been signed for the next school year so I was "unhired."

7
Floyd Co. BOE--substitute teacher
Rome News Tribune--composing/dispatch; State Farm--insurance agent
1. Health 2. Didn't like it

4
Graduate student 1990-91
Mother 1995-98
I was a full-time graduate student, 1990 - 91.
I have been a stay-at-home mom since 1995.

5
Homemaker/Church Pianis
To stay with and raise my children

5 ½
'93 - '95 Research and Development for Applied Technologies
'95 - '98 Wife/Mother
We moved (due to husband's job) in the middle of a school year. I couldn't find a job teaching and took a temporary job that turned "permanent." I was planning to stay home when we had children so I didn't even look for a job that following fall.

1

substitute teaching, secretarial work

I turned down a teaching job because I did not feel comfortable with the administration and was not offered another job that year.

5

Homemaker, tutor, adjunct instructor

Birth of children--stay-home mother

½

Substitute teacher

Could not find a position in the middle of the school year

4

Temporary employment

Paralegal and legal typing

I was unhappy during my 1st year of teaching. I thought I could find something better, but couldn't. I have come to the conclusion that I just hated teaching 8th grade. I am very happy teaching high school.

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Appendix D

Reasons for Considering Leaving the Teaching Profession

I never considered leaving seriously, but during my first few months I asked myself if I made the right choice. The first few months are overwhelming. We are responsible to ourselves, our students, parents, co-workers, administrators, county office members, and the community!

Remain home full-time

1st year--severe discipline problems and lack of support from administrators

Thought I would not find an opening mid-year when I moved to Ohio--but I did

Possibility of working out of home after having children.

Not for another public career

Lack of support in discipline by administration; lack of parent support

I've thought about moving into administration and professional education. I enjoy the collegiate environment!

I have decided to become an attorney. Primarily because of salary reasons.

I have now entered the educational administration field, but will always consider myself a teacher.

To become a media specialist

Burnout, financial

Appendix E

Results from a Survey of the 1987 - 1998 Berry College Mathematics Education Graduates

What advice would you give to first-year teachers?

Don't be afraid to ask questions!!
Make copies of everything.
Start out tough (discipline-wise) in the very beginning!
Be willing to do extra-curriculuar activities. If you don't choose your own, they will be chosen for you!

1. The first year is about survival. You have many years ahead to work toward being a great teacher. I didn't realize this and agonized too much over not meeting the standards I thought I should reach.
2. Call parents. This is tough to do!
3. Don't feel shy about asking questions. Other teachers are great resources.
4. Don't be too nice. Stick to your rules and consequences that were set in the beginning.
5. Make time for yourself.

Although developing positive relations with peer teachers is important for long-term job satisfaction, it cannot be a first priority.
Avoid too much time in the teachers' lounge--you don't need the influence of those tired, perhaps burned-out teachers. Instead, find a couple of tireless enthusiastic, committed co-workers to share ideas and experiences.
During your first year, count on lots of work.

Keep an open mind.
Enjoy yourself.

Don't be too critical of the job you do.
There are some students that choose to be disruptive and/or fail no matter what you do.
Do not become friends with your students. Stay professional and uninvolved personally with them.
Be stern and consistent with your rules.
If things aren't working for you, make a change--don't wait until next year.
You are always in charge--take control of your classroom. If you don't, they will.

Teaching is challenging every year, but the first year is particularly overwhelming as one attempts to build lesson plans full of student involvement, to develop classroom discipline and management at an appropriate level, and to balance the success and defeats one experiences with students and parents.
Do everything you do as well as you possibly can because a strong base makes the

next year much easier.
Try and find a "mentor" teacher to assist you with ideas and to provide feedback.
Be open to advice. You'll appreciate it more and more.

Read thoroughly and apply The First Days of Schoool: How to be an Effective Teacher by Harry K. Wong and Rosemary Tripi Wong.
Be prepared with twice as much teaching material than you will need each day.

Check about a mentor/protege program.
Don't be afraid to ask for help from another teacher.
Don't take on too many extra activities (coaching, clubs, etc.)

If you do not have a mentor teacher, ask your department head or principal. A mentor can help tremendously-- not just with the teaching of a subject, but everyday tasks involved in being a teacher.

Be organized from the beginning.
Be fair with all students.
Never break a promise (and therefore try not to say, "If you do that again, I will..." because then you have to do it)
Tell them what you expect and then demand it-- from everybody.
Be willing to go the extra mile.

Do your best.
Don't get overstressed.
Find friends and talk to them.
Enjoy everything!

Be flexible.
Don't expect to be perfect-- you'll get better each year.
Find a veteran teacher you respect and make them your best friend.

Dress professionally.
Create a separation from students at the beginning of the year-- must have discipline in order to be a successful teacher.
Don't try to be liked--try to be respected.
Watch and learn from successful teachers.
Always keep students best interests in mind.
You must show each student that you care about him/her.

1. Find a network. Search your faculty and other faculties for creative, energetic people who are enthusiastic about teaching. Share ideas and concerns and use their ideas too. Networking with positive, sharing individuals helps first year teachers feel a lot more comfortable and less lonely.
2. Make friends with your discipline coordinator. The support of an administrator in this area of teaching is vital.

3. Explore your library/media center. There are lots of untapped resources in these areas that are often overlooked!

As the saying goes "Don't smile before Christmas"--you can be too "friendly" to students--that could hinder your discipline and students' respect for you.
Ask questions!!
Have high expectations for students.

Professionally-- Stay away from controversial teachers and situations.
Take care of all problems in the classroom if possible.
Be tough--academically and in discipline.
Personally--Watch your money.
Exercise daily.

Relax and enjoy it.
Don't get so tense about "messing up".

Don't tell the students it's your first year.
Seek advice from others and try to share worksheets and tests.
Beware of teachers who want to "buddy-up" to you because they have no friends and you're new.
Plan ahead but be flexible!
Your students don't need a "friend". They need an advisor, mentor, and protector.

Learn as much as possible about effective discipline.
Know your school/county policies.
Involve parents as much as possible.

13. What recommendations for changes to mathematics education program at Berry College would you make?

Ideas for applications of high school math courses to daily life.
Perhaps in the methods course, some emphasis should be placed on "projects/labs" involving math.
How to integrate math with other courses such as science.

More emphasis on how to teach Algebra I/II
Lots of graphing calculator/computer "stuff"

I really think the best thing about it was the practicums or actual hands-on training in the schools. I think it was important that these started no later than the sophomore year.

More experience with activities--Not cooperative learning though

Bigger-- more professors, more classes

Make sure math teachers are prepared for the block schedule with longer class periods.

I thought it was a great program.

I would like to see Math Education classes stress the flow of mathematics from year to year. For example: An Algebra teacher should know that a geometry student needs to be able to simplify and work with radicals. A geometry teacher needs to be sure she refreshes students on factoring and quadratics. Each year builds on the previous in specific ways.
While I was at Berry College, the discovery approach was stressed in Math Ed. classes. (I'm glad it was!! I like it) Other methods should also be stressed. Particularly, cooperative learning and technology (graphing calculators, CBL's, etc). In addition, Georgia Certified Teachers need specific instruction in specific courses (particularly Applied Math I and II). These courses use specific techniques and materials and need special focus.

More practicums (teaching) because I did not realize I didn't like teaching until 1 month before graduation.
Maybe advise another major like accounting.

Not many! Math Methods was the best class I've ever had. Maybe teach two semesters of Methods. The more teaching practice you have, the better off you will be. Dr. Cat let us teach a lesson and our peers acted like high school students. We were limited to 1 lesson because of time. Maybe 2 semesters would allow more time for teaching practice.

Focus more on day to day management of classroom-- taking roll, discipline problems, or management, etc.

Dr. Cat did such a good job gearing the program, I can't think of much. Some practical

computer use instead of programming would be preferred. The high school in Jones County teaches Algebra I on the computer, and programming doesn't help much with that type class.

Only thing I can think of is possibly expansion. But not too much; the small classes were one of the best qualities.

I was very pleased and well prepared for my teaching. The greatest asset of my training was the amount of time spent in the classroom before student teaching. I taught with many people who had only spent 2-4 hours observing and then student teaching!

More experience in the classroom before student teaching. Experience is one of the greatest teachers.

Make the field experiences prior to student teaching more meaningful. Ex. Students attend the same class(es) every day.

Very happy with your program.

1. Use The First Days of School: How to be an Effective Teacher in a course on classroom management.
2. When I was at Berry, the only math ed. practicums involved going to local high schools and tutoring. The first lesson I taught in a high school was not until I was student teaching. Change the practicums (if they haven't already been) so that the math ed. majors actually teach lessons in a high school before student teaching.

"Theory" classes are basically useless. It is very important that students in education classes be exposed to concrete ideas and lessons that can directly apply in their classrooms. The most wonderful classes I have experienced since my Berry education provided me with a wealth of teaching ideas for specific concepts I was teaching in my classes. Practicums should allow the education student to teach in some capacity rather than just observe. Also, students should receive guidance on classroom discipline techniques and classroom management ideas to a greater extent than Berry has previously.

More focus on teaching high school level math/less focus on abstract ideas.
More classroom management skills taught.
Earlier student teaching--when you student teach you get a good idea of what it's all about. Unless it's changed, student teaching comes right before graduation. By that time, it's too late to change your major if you find that it's not for you.
Maybe year- long student teaching instead of semester-long.

My preparation for teaching Geometry was weak-- I had to remember my own high school instruction for ideas.
I hope by now that Berry students have computer lab experience and the familiarity of the best available software.

Research the different texts and programs systems use. Ex. Unviersity of Chicago Math Project

More on how to motivate lower level students who don't care about school or their education.